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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,022	11/21/2006	Roland Edelmann	283357US0PCT	1934
22850	7590	02/07/2011		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER TOSCANO, ALICIA	
			ART UNIT 1766	PAPER NUMBER
			NOTIFICATION DATE 02/07/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/563,022	EDELMANN ET AL.	
	Examiner	Art Unit	
	ALICIA TOSCANO	1766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Objection over Claim 16 is overcome by amendment.

Priority

2. A certified translation of 10330020.1 was submitted on 1/7/11.
3. Rejections over Mehnert (US 6830816, US 2003/0008974), and Edelmann (US 6699586, US 20020197457) are 103 rejections based on 102(a) and 102(e) dates. The references are “by another” and still constitute prior art.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-14, 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehnert (US 2003/0008974, equivalent to US 6830816, written over '974).

Elements of this rejection are as set forth in the action dated 3/2/10. The amendment overcomes the ratio of Column 9 line 18, however, Column 9 line 24 discloses the ratio of oxide component (i) to organosilane components (ii-iv) to synthetic resin of 0.2:0.5:1 to 3:1:1. Taking only the oxide to silane ratios (0.2:0.5 to 3:1) this converts to a silane to oxide ratio of 2.5:1 to 0.33:1 (i.e. 0.5:0.2 converts to 2.5:1, 1:3 converts to 0.33:1). The instant claims convert to a silane to oxide ratio range of 19:1 to 1.5:1. A prima facie case of obviousness exists over the claimed range in light of the

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overlapping points therein. See *In re Wertheim*: In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Since the composition requirements are met the “solvent” requirements of the silane component are inherently met. See remarks below.

Claim 18 of '974 (and claim 21 of '816) discloses a range of 0.5-6 moles water per mole Si component (ii). Si component (ii) only has one Si atom, thusly the range is equivalent to 0.5-6 moles water per mole Si atom. As such a prima facie case of obviousness exists over the claimed range. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Claim 1, Column 9 line 18, Column 6 line 46 and of '974 further meet the composition requirements of instant claims 1, 4, 5, 7, 8 and 9. The paste of Mehnert is disclosed to be diluted (Column 5 line 49) to obtain lacquer systems, inherently forming the dispersion of the claims, and the viscosity is preferably 800-1000 mPas (Column 6 line 47), meeting the viscosity requirements of the claims. Column 10 line 47 of '974 further meets the requirements of instant claims 2 and 3, claim 12 of '974 meets the requirements of instant claim 6, elements above meet the requirements of claims 11-14,

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The Examples of '816 further meet the process requirements of claims 16-18 and elements of claims 20-22 are met by elements set forth above.

Remarks:

Applicant argues Mehnert is describing a oxide-silane core-shell capsule obtained by reacting the oxide with the silane. Applicant argues the amended range overcomes the core/shell ratio ranges of Column 9 lines 16-18. Applicant argues there is no disclosure that the organosilane functions as a solvent, nor is the range of the claims disclosed therein.

The Examiner disagrees. Though drawn to a different end product, Applicant's claims are merely drawn to a formulation and/or a method of making said formulation (comprising mixing the elements together). The reaction composition of Mehnert overlaps the formulation (and process of making) requirements of the claims. Though the amendments are sufficient to overcome the core/shell range of Column 9 lines 16-18 a broader disclosure of reaction products is disclosed 6 lines down (Column 9 lines 24-25) and the range therein overlaps the amended claims. Since the composition requirements are met the silane meets the "solvent" language of the claims. As such Applicant's arguments that the range nor the solvent functionality are not met are not persuasive and the rejection stands as set forth above.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann (US 20020197457 or US 6699586).

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Elements of this rejection are as set forth in the action dated 3/2/10. Claim 11 of '586 discloses the oxide to silane ratio of 100:1 to 0.5:1, which converts to a silane to oxide ratio of 0.01:1 to 2:1 (1:100 to 1:0.5 converts to 0.001:1 to 2:1). The ratio range of the claims converts to 19:1 to 1.5:1, thusly a prima facie case of obviousness exists over the claimed range in light of the overlapping points therein. See *In re Wertheim*: In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Since the composition requirements are met the "solvent" requirements of the silane component are inherently met. See remarks below.

Claims 4, 8 and 11 of '586, meet elements of instant claims 1, 4, 5, 8. The coating composition of Edelman is disclosed to have a low viscosity of from 500-1000 mPas (Column 10 line 14), since the particles are dispersed in the overall coating matrix the liquid dispersion requirements are deemed met, as further required by amended claim 1. Claim 18 of '586 discloses the use of 0.5-6 mol of water per mole Si, as such a prima facie case of obviousness exists over the water to Si ratio of the independent claims. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

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As such all elements of claims 1, 4, 5 and 8 are met, elements of claim 9 are deemed inherent since the composition requirements are met, claim 14 of '586 meets the requirements of instant claim 2, claim 13 of '586 meets the requirements of instant claim 3, claim 2 of '586 meets the requirements of instant claims 6 and 7, claims 11-14 and 20-23 are met by elements set forth above, Column 11 line 52 meets the requirements of instant claims 15 and 19, Ex 1 further meets the limitations of claims 16-18.

Remarks:

Applicant argues Edelmann discloses oxide particles having a silicon shell and there is no disclosure of the 0.001 to <0.8 mole water per mole Si. Applicant argues the use of the silane as a solvent, nor the range ratio of the claims is disclosed in Edelmann.

The Examiner disagrees. As set forth previously, Claim 18 of '586 discloses the use of 0.5-6 mol of water per mole Si, as such a prima facie case of obviousness exists over the water to Si ratio of the independent claims. As such Edelmann properly meets the water to Si ratio of the claims. As set forth above, Claim 11 of '586 discloses the oxide to silane ratio of 100:1 to 0.5:1, which converts to a silane to oxide ratio of 0.01:1 to 2:1 (1:100 to 1:0.5 converts to 0.001:1 to 2:1). The ratio range of the claims converts to 19:1 to 1.5:1, overlapping the instant claims. As such Edelmann properly meets the range ratio of the claims. Since the silane composition requirements are met, the "solvent" properties thereof are inherently met. Though drawn to a different end

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product, Applicant's claims are merely drawn to a formulation and/or a method of making said formulation (comprising mixing the elements together). The reaction composition of Mehnert overlaps the formulation (and process of making) requirements of the claims. As such the rejection properly meets the claimed elements and stands as set forth above.

6. Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehnert (US 20030008974 or US 6830816) in view of Hardman (US 4329273).

This rejection is as set forth in the action dated 3/2/10, reiterated below in its entirety. See remarks below.

Column 14 line 8 and Examples of '974 discloses the acids of claims 15, however the ppm of the acids is not disclosed.

Hardman discloses silane compositions comprising the partial hydrolysis product of an alkoxy silane. Hardman further discloses in great detail in Columns 7 and 8 how to form the partial hydrolyzate. Hardman discloses that anywhere from 0.5 to 1.5 moles of water may be used per mole of alkoxysilane (Column 7 lines 67-68), Hardman further discloses that the acid used in combination may be hydrochloric or acetic acid and may be added in an amount ranging from 10-500 ppm (Column 8 lines 25-30).

A prima facie case of obviousness exists to use that taught by Hardman since it is known to be suitable for the intended use. See Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), wherein the selection of a known material

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based on its suitability for its intended use supported a prima facie obviousness determination. As such the limitations of claim 15 are deemed met and since the amount of acid is met the pH is deemed inherent, as required by claim 19.

Remarks:

Applicant argues the Hardman does not disclose the ratio range of the claims and does not cure the deficiencies of Mehnert.

The Examiner disagrees. The Examiner is not relying on Hardman for the ratio range. Mehnert meets the range requirements of the amended claims. Proper motivation to include the use of 10-500 ppm acid is set forth (i.e. such an amount of acid is known in the art to be used to for the reaction of alkoxysilanes), as such the rejection is found proper and stands.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 12, 21 of U.S. Patent No. 6830816 in view of US 4329273.

This rejection is as set forth in the action dated 9/10/10, reiterated below in its entirety. Column 9 line 24 discloses the ratio of oxide component (i) to organosilane components (ii-iv) to synthetic resin of 0.2:0.5:1 to 3:1:1. Taking only the oxide to silane ratios (0.2:0.5 to 3:1) this converts to a silane to oxide ratio of 2.5:1 to 0.33:1 (i.e. 0.5:0.2 converts to 2.5:1, 1:3 converts to 0.33:1). The instant claims convert to a silane to oxide ratio range of 19:1 to 1.5:1. A prima facie case of obviousness exists over the claimed range in light of the overlapping points therein. See *In re Wertheim*: In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Since the composition requirements are met the “solvent” requirements of the silane component are inherently met.

Claim 1 and Column 9 line 18, Column 6 line 46 and claim 21 of '816 meet the composition requirements of instant claims 1, 4, 5, 7, 8 and 9. Those portions of the specification which provide support for the patent claims may also be examined and

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considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970). Column 10 line 47 of '816 further meets the requirements of instant claims 2 and 3, claim 12 of '816 meets the requirements of instant claim 6, claim 21 of '816 meets the requirements of instant claims 10-14, Column 14 line 8 and Examples discloses the acids of claims 15, however the ppm of the acids is not disclosed.

'273 includes elements as set forth above and discloses the known use of 10-500 ppm acid in a similar hydrolysis reaction. A prima facie case of obviousness exists to use that taught by '273 since it is known to be suitable for the intended use. See Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945), wherein the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination. As such the limitations of claim 15 are deemed met and since the amount of acid is met the pH is deemed inherent, as required by claim 19. The Examples of '816 further meet the process requirements of claims 16-18 and elements of claims 20-23 are met by elements set forth above.

Remarks:

Applicant argues the solvent requirements and range ratio requirements are not met.

The Examiner disagrees. The solvent requirements and ratio requirements are met, as set forth above. As such arguments herein are found moot and the rejection stands as set forth above.

8. Claims 1-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4, 8, 11, 14, 13, 2, 18 of U.S. Patent No. 6699586.

This rejection is as set forth in the action dated 9/10/10, reiterated below in its entirety. Claim 11 of '586 discloses the oxide to silane ratio of 100:1 to 0.5:1, which converts to a silane to oxide ratio of 0.01:1 to 2:1 (1:100 to 1:0.5 converts to 0.001:1 to 2:1). The ratio range of the claims converts to 19:1 to 1.5:1, thusly a prima facie case of obviousness exists over the claimed range in light of the overlapping points therein. See *In re Wertheim*: In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Since the composition requirements are met the "solvent" requirements of the silane component are inherently met.

Although the conflicting claims are not identical, they are not patentably distinct from each other because Claims 4, 8 and 11, 18 of '586 meet the requirements of instant claims 1, 4, 5, 8, elements of claim 9 are deemed inherent since the composition

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requirements are met, claim 14 of '586 meets the requirements of instant claim 2, claim 13 of '586 meets the requirements of instant claim 3, claim 2 of '586 meets the requirements of instant claims 6 and 7, claim 18 of '586 meets the requirements of instant claim 10, claims 11-14 and 20-23 are met by elements set forth above, Column 11 line 52 meets the requirements of instant claims 15 and 19, Ex 1 further meets the limitations of claims 16-18. Those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

Remarks:

Applicant argues the solvent requirements and range ratio requirements are not met.

The Examiner disagrees. The solvent requirements and ratio requirements are met, as set forth above. As such arguments herein are found moot and the rejection stands as set forth above.

9. Rejection over Claims 1-23 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 26, 33, 27, 53, 34, 53 of copending Application No. 11258025 is overcome by amendment. The ranges of page 18, lines 28-30 do not overlap those of the amended claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is (571)272-2451. The examiner can normally be reached on M-F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALICIA TOSCANO/
Examiner, Art Unit 1766